AMENDMENT TO THE SPECIFICATION:

Please amend the Specification, beginning at page 3, line 6, as follows:

--SUMMARY OF THE INVENTION

It is therefore an object of the present invention to provide transition metal compounds which can be used for the polymerization of olefins to give elastomers having very high molar masses both in the presence of small amounts of cocatalyst and at high temperatures.

This object is surprisingly achieved by transition metal compounds having at least two π systems and at least one donor-acceptor interaction between the π systems, wherein at least one π system is a fluorenyl ligand and the transition metal compound bears at least one alkyl or aryl group on at least one acceptor atom and transition metal compounds having fluorinated aryl groups are excepted.

The present invention further provides the reaction product of cocatalysts and transition metal compounds.

In addition, the invention provides a process for the homopolymerization or copolymerization of one or more olefins, cycloolefins, isoolefins, alkynes or diolefins as monomers or for ring-opening polyaddition at from –60 to +250°C, wherein the polymerization is carried out in the presence of at least one transition metal compound or a reaction product.

The present invention further provides for the use of the transition metal compounds of the invention or their reaction products as catalyst components for preparing high molecular weight and ultrahigh molecular weight elastomers.

π systems which can be used for the purposes of the invention in addition to the fluorenyl ligand include substituted and unsubstituted ethylene, allyl, pentadienyl, benzyl, butadiene, benzene, the cyclopentadienyl anion and the species obtained by

replacement of at least one carbon atom by a heteroatom. Among the species mentioned, the cyclic species are preferred. More preference is given to the cyclopentadienyl anion. The coordination of such ligands (π systems) to the metal can be of the σ type of the π type.

The present invention also provides a process for preparing an elastomer including the step of admixing one or more monomers in the presence of at least one transition metal compound having at least two ligands and at least one donor-acceptor interaction between the ligands, wherein at least one ligand is a fluorenyl ligand and the transition metal compound has at least one alkyl or aryl group on at least one acceptor atom and optionally one or more cocatalyst, wherein the process is carried out at a temperature from about –60 to about +250°C, wherein the process produces a polymer having a mean molar mass M_n greater than 500 kg/mol.

In addition, the present invention provides a process for preparing a polyolefin including the step of admixing one or more monomers in the presence of at least one transition metal compound having at least two ligands and at least one donor-acceptor interaction between the ligands, wherein at least one ligand is a fluorenyl ligand and the transition metal compound has at least one alkyl or aryl group on at least one acceptor atom and optionally one or more cocatalyst, wherein the process is carried out at a temperature from about –60 to about +250°C, wherein the process produces polymers having a mean molar mass M_n greater than 500 kg/mol, and optionally one or more cocatalyst, wherein the polyolefin has an $M_n \geq 5 \cdot 10^4$ g/mol.

Accordingly, the present invention provides a process for preparing elastomers with long-chain branching, elastomers with bimodal or multimodal molecular weight distributions. Further the present invention provides a process for preparing elastomeric polypropylene and other elastomers selected from the group consisting

of ethylene-propylene-diene copolymers, ethylene-butene-diene copolymers, ethylene-hexene-diene copolymers, ethylene-octene-diene copolymers or mixtures thereof.

DETAILED DESCRIPTION OF THE INVENTION--